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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/399,065	09/18/99	KENYON J	41018.P004

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WM02/0615

EXAMINER	
NAJJAR, S	
ART UNIT	PAPER NUMBER
2154	6

DATE MAILED:
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/399,065	KENYON ET AL.	
	Examiner	Art Unit	
	Saleh Najjar	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15)☒ Notice of References Cited (PTO-892)
16)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18)☐ Interview Summary (PTO-413) Paper No(s). _____ .
19)☐ Notice of Informal Patent Application (PTO-152)
20)☐ Other: .

1. This action is responsive to the application filed on September 18, 1999. Claims 1-34 are pending examination. Claims 1-34 represent a method and system directed toward dynamic scalable multi-media content streaming.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-10, 12-21, and 23-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Kalra et al., U.S. Patent No. 5,953,506.

Kalra teaches the invention as claimed including a the serving of scalable multi-media streams to clients based on network bandwidth and client computer capabilities (see abstract).

As to claim 1, Kalra teaches a client computer system including a method of operation comprising:

determining operating characteristic value(s) for at least one operating characteristic of the client computer system (see figs. 1-13; col. 15, lines 20-60, Kalra teaches that the client CPU performance and constraint is determined); and

adaptively requesting streaming of model data from a remote content providing server, based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system (see col. 16, lines 1-50, Kalra teaches that the server delivers the stream version that best matches the client profile).

As to claim 2, Kalra teaches the method of claim 1 above, wherein the at least one operating characteristic comprises one or more operating characteristics selected from a group consisting of communication bandwidth, processor power, availability of memory, availability of swap space, memory and bus speed, availability of video

memory, availability of digital signal processing for audio decompression, and availability of graphics acceleration (see col. 15, lines 20-60, Kalra teaches that bandwidth and CPU constraints of the client is determined).

As to claim 3, Kalra teaches the method of claim 1, wherein said determining is performed as an integral part of an installation of a multi-media content player, and said adaptively requesting streaming of model data is performed by said multi-media content player (see col. 15-16, Kalra teaches that the client profile is communicated as a request is made from a multimedia content player).

As to claim 4, Kalra teaches the method of claim 1, wherein said model data comprise of data selected from a group consisting of geometry data, lighting data, coloring data, texturing data, animation data, and audio data (see col. 18-24).

As to claim 5, Kalra teaches the method of claim 1 above, wherein said adaptively requesting of streaming of model data comprises adaptively requesting the remote content providing server for different versions of the model data based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system (see col. 15-16, Kalra teaches that the version or quality of content is served based on bandwidth and client configuration).

As to claim 6, Kalra teaches the method of claim 1 above, wherein the method further comprises monitoring at least one performance indicator for the client computer system (see col. 15, Kalra teaches that the client CPU constraint is continuously evaluated).

As to claim 7, Kalra teaches the method of claim 6 above, wherein said at least one performance indicator comprises one or more selected from a group consisting of bandwidth utilization, CPU utilization, memory utilization, memory swapping, cache hit rate, and audio frames drop rate (see col. 15, Kalra teaches that the client CPU constraint and network bandwidth constraints are continuously evaluated).

As to claims 8-9, Kalra teaches the method of claim 6 above, wherein said adaptively requesting of streaming of model data comprises switching to requesting the

remote content providing server for higher or lower precision versions of the model data, responsive to indicator values of the monitored at least one performance indicator (see col. 16-17, Kalra teaches that network bandwidth and client CPU constraint are continuously monitored and the content quality is varied accordingly).

As to claim 10, Kalra teaches the method of claim 1 above, wherein the method further comprises automatically synchronizing rendering of the received model data in accordance with the timeliness of the receipt of the model data (see col. 18, lines 10-15, Kalra teaches that delivery of the multimedia data is synchronized according to the client receiving and processing performance).

Claims 12-21 do not teach or define any new limitations above claims 1-10 and therefore are rejected for similar reasons.

As to claim 23, Kalra teaches a computer server including a method of operation comprising:

storing multiple versions of model data tailored for different operating environments differentiated in accordance with values of at least one operating characteristic of a remote requesting client computer system (see figs. 1-13; col. 15-18, Kalra teaches a server that stores different quality streams and maps them to different client profiles);

accepting requests for said model data that includes version selection designations from the remote requesting client computer system (see col. 16-18, Kalra teaches that a client request is submitted to the server which delivers the correct version in response); and

streaming the requested versions of the model data to the remote requesting client computer system, responsive to the accepted requests (see col. 15-18, Kalra teaches the correct video quality stream is delivered to the client based on client and network capabilities).

Claims 24-34 do not teach or define any new limitations above claims 1-10, 12-21, and 23 and therefore are rejected for similar reasons.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 11, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalra.

Kalra teaches the invention substantially as claimed including a the serving of scalable multi-media streams to clients based on network bandwidth and client computer capabilities (see abstract).

As to claim 11, Kalra teaches the method of claim 10 above.

Kalra does not explicitly teach the limitation wherein said automatic synchronization of rendering of the received model data comprises dropping audio data in proportional to the amount of the time the audio data arrived late. Kalra does teach dropping video data in proportional to the amount of the time the video data arrived late (see col. 18).

However, "Official Notice" is taken that the concept and advantages of dropping audio data frames that arrived too late with respect to its sequence is old and well known in the data communication art. It would have been obvious to one of ordinary skill in the art to apply the concept of dropping audio data frames in Kalra to allow efficient synchronization of downloaded multimedia presentations.

Claim 22 does not teach or define any new limitations above claim 11 and therefore is rejected for similar reasons.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Method and apparatus for operating a network with heterogenous clients by Vishwanath et al., U.S. Patent No. 6,216,157.
- System for adaptive video/audio transport over a network by Aharoni et al., U.S. Patent No. 6,014,694.
- Assessing network performance by Lipa et al., U.S. Patent No. 6,061,722.
- System device and method for streaming a multimedia file by Goetz et al., U.S. Patent No. 5,928,330.
- Multimedia compression system by Chaddha, U.S. Patent No. 6,233,017.
- Dynamic play-back of multimedia streams by Agrawal et al., U.S. Patent No. 6,072,809.
- Digital encoder and decoder synchronization in the presence of data dropouts by Tomasevich, U.S. Patent No. 4,774,496.
- Selective retransmission for efficient and reliable streaming of multi-media packets in a network by Klemets et al., U.S. Patent No. 5,918,002.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saleh Najjar whose telephone number is (703) 308-7613. The examiner can normally be reached on Monday-Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AN MENG AI, can be reached on (703) 305-9678. The fax phone number for this Group is (703) 308-9052.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Saleh Najjar
Examiner Art Unit 2154